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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/020,782	12/12/2001	Stephen Memory	665.00947	9531

7590 10/21/2003

WOOD, PHILLIPS, VAN SANTEN, CLARK & MORTIMER
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EXAMINER	
DUONG, THO V	

ART UNIT	PAPER NUMBER
3743	

DATE MAILED: 10/21/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/020,782	MEMORY ET AL.	
	Examin r	Art Unit	
	Tho v Duong	3743	

-- Th MAILING DATE of this communication appears on th cover sheet with the correspond nce address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 August 2003* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-23* is/are pending in the application.

4a) Of the above claim(s) *2-7,9-12 and 14-19* is/are withdrawn from consideration.

5)☒ Claim(s) *1,8 and 21-23* is/are allowed.

6)☒ Claim(s) *13 and 20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *8* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claims 1-23 are pending. Claims 2-7,9-12 and 14-19 have been withdrawn from consideration.

Response to Arguments

Applicant's arguments filed 8/14/2003 have been fully considered but they are not persuasive. Applicant's argument regarding claims 13 and 20 that neither the radiator or condenser disclosed in Martin having multiple rows of tubes, has been very carefully considered but is not deemed to be persuasive. As stated in the previous rejection, the examiner has interpreted that the combination a radiator (1) and a condenser (2) is considered to read as a heat exchanger module (1,2). Therefore, there are at least two rows of tube in this heat exchanger module since one row contributed from the condenser and the other row is contributed from the radiator. Applicant's further argument that none of the references disclose a gas cooler employed in a transcritical cooling system, has been very carefully considered but is not deemed to be persuasive. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Reference to Waldorf clearly discloses (figures 1, 2 and column 3, line 25-column 4, line 8) a heat pump system (36) which is a transcritical cooling system, that employs a gas cooler (15,26) in an automobile. The examiner has relied upon Martins only to disclose a detail of a compact gas cooler used in an automobile but not to teach a transcritical cooling system that employs a gas cooler since Waldorf already

discloses the claim limitation. For the above reasons, it is believe that the rejections of claims 13 and 20 should be sustained.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 13 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Waldorf (US 4,688,394) in view of Martins (US 6,502,305). Waldorf discloses (figures 1, 2 and column 3, line 25- column 4, line 8) a motor vehicle air conditioner including a heat pump system (36) wherein the heat pump system having a compressor (11) for compressing a refrigerant; an evaporator (13) connected to an inlet of the compressor, a gas cooler (15,26) for receiving compressed refrigerant from the compressor in a cooling mode. Waldorf further discloses (figure 2, dashed lines) that in a heating mode, the gas cooler is an evaporator and the evaporator is the gas cooler. Waldorf does not disclose the details of the gas cooler (15,26). Martin discloses (column 1, lines 31-37) a compact gas cooler, which is used in a motor vehicle air conditioning system. Martin further discloses (figures 1 and 5) a compact gas cooler including a heat exchanger module (1,2) having a front and a back; a plurality of spaced rows of flattened tubes (5,10) from front to back and defining aligned tube runs in each row; fins (30) abutted to adjacent tube runs in each row and extending from front to back so that each fin is common to each of the rows and slits (22) extending completely through the fin at a location in

the space between the tube run. Martin further discloses (column 4, lines 5-15) that the slits (22) are formed without removal of any fin material. The motivation to combine the Waldorf and Martin is clearly stated in column 1, lines 37-42 that a gas cooler with common fins such as common fins (30) would simplify the manufacture and make the gas cooler more compact. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use Martin's gas cooler in Waldorf to simplify the manufacture and make the gas cooler more compact.

Allowable Subject Matter

Claims 1,8 and 21-23 are allowed.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Toyo Radiator Co. (JP 11159987) discloses a heat exchanger that has fins with slits formed on the fin.

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Tho Duong whose telephone number is (703) 305-0768. The examiner can normally be reached on from 9:30-6 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Henry Bennet, can be reached on (703) 308-0101. The fax phone number for the organization where this application or proceeding is assigned is (703)308-7764.

Any inquiry of a general nature or relating to status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0861.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Tho Duong

October 18, 2003

Henry Bennett
Supervisory Patent Examiner
Group 3700